ImageWriter

INTEL dsPIC30F Family Device Support Detail & Setup

ImageWriter Support Hierarchy

Manufacturer: Microchip **Library:** MCT-dsPIC-CUSTOM.cab

Device: dsPIC30F2010, dsPIC30F2011, dsPIC30F2012, dsPIC30F3010, dsPIC30F3011, dsPIC30F3012, dsPIC30F3013, dsPIC30F3014, dsPIC30F4011, dsPIC30F4012, dsPIC30F4013, dsPIC30F5011, dsPIC30F5013, dsPIC30F5015, dsPIC30F5016, dsPIC30F6010, dsPIC30F6010A, dsPIC30F6011, dsPIC30F6011A, dsPIC30F6012, dsPIC30F6012A, dsPIC30F6013, dsPIC30F6013A, dsPIC30F6014, dsPIC30F6014A, dsPIC30F6015

Objects for dsPIC30F Family

Flow Object Name:	*Program / Execute*	*Verify*	*Load*	*Object Size (Bytes)*	
FLASH	●	●	●	2010	0x4000
				2011	0x4000
				2012	0x4000
				3010	0x8000
				3011	0x8000
				3012	0x8000
				3013	0x8000
				3014	0x8000
				4011	0x10000
				4012	0x10000
				4013	0x10000
				5011	0x16000
				5013	0x16000
				5015	0x16000
				5016	0x16000
				6010	0x30000
				6010A	0x30000
				6011	0x2C000
				6011A	0x2C000
				6012	0x30000
				6012A	0x30000
				6013	0x2C000
				6013A	0x2C000
				6014	0x30000
				6014A	0x30000
				6015	0x30000

Flow Object Name:	Program / Execute	Verify	Load	Object Size (Bytes)	
EE	●	●	●	2010	0x400
				3010	0x400
				3011	0x400
				3012	0x400
				3013	0x400
				3014	0x400
				4011	0x400
				4012	0x400
				4013	0x400
				5011	0x400
				5013	0x400
				5015	0x400
				5016	0x400
				6010	0x1000
				6010A	0x1000
				6011	0x800
				6011A	0x800
				6012	0x1000
				6012A	0x1000
				6013	0x1000
				6013A	0x1000
				6014	0x800
				6014A	0x800
				6015	0x800
CONFIG	●	●	●	0x07	
DEVICE ID			●	0x04	
CHIP ERASE	●				

I/O Multi Connector Setup for dsPIC30F Family
High Voltage ICSP Method

ImageWriter:		Target:
Connector Pin #	***Pin Name***	***Connections***
1	GND	GND
2	GND	GND
3	TXD (MOSI/TDO)	See note 1
4	RXD (MISO/TDI)	PGD
5	RTS (TMS)	NOCONN
6	CTS	NOCONN
7	XCLK	PGC
8	RST	NOCONN
9	SCL	NOCONN
10	SDA	NOCONN
11	GND	GND
12	GND	GND
13	VPP/EXT_IN	12.0V DC
14	VPP/EXT_OUT	MCLR
15*	Target V+ (7.0V max)	Supply 2.5-5.5 V
16*	Target V+ (7.0V max)	Supply 2.5-5.5 V
17	GND	GND
18	GND	GND
19	ImageWriter Power	Supply 9-24 VDC
20	ImageWriter Power	Supply 9-24 VDC

1 Pin 3 must be connect to Pin 4 with an external 1K Ohm resistor in series.
*Maximum Pin-Driver output voltage = 4.2V.
*MicroChip specifies that VCC may be 2.0-5.0V for programming operations; however bulk-erase is only valid with VCC at 4.5V or higher. If you use chip-erase, you must provide 4.5V DC or higher VCC levels.

Support Notes:

1. Block limits are not changeable on the Flash Code array or the EE array. You must program the entire array for each operation.
2. Updated version of this algorithm library (Jun 04 2007 or newer) directly supports Microchip's Little Endean and "Phantom Byte" data-file format for the FLASH object only. Hex data files should be downloaded directly. FLASH object size is increased to include data-space occupied by the phantom byte in memory.
3. The "Phantom Byte" will always be loaded as 0x00, and ignored during Verify.

Disclaimer

Typical implementation of **ImageWriter** includes but is not limited to external power provision to **ImageWriter**, device access restrictions on the target board, external hardware on the target board, or software changes created by the user affecting timing, device erasure, programming, or verification. Data I/O warranty coverage applies only when the product is used in conformance with technical specifications put forth by Data I/O and by the semiconductor device manufacturer.

In the interest of achieving the highest levels of safety and quality, Data I/O recommends that all programming processes be tested and documented in a prototype project prior to transition to volume manufacturing. For additional information see In-System Programming Design Guidelines (http://www.dataio.com/isp).

ImageWriter programs semiconductor devices through the use of circuits designed precisely to operate in accordance with specifications outlined by the device manufacturer. Provision and calibration of power supplies are critical for proper operation. **ImageWriter** has been fully tested by Data I/O Corporation for quality performance.